“Occupational Therapists’ Views Regarding Premature Infant Transition and Care”

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Objectives

- To discuss the OT role in transition process of premature infant from NICU to home
- To report what OTs working in this capacity feel is important regarding roles, assessments, and interventions
- To add to current OT research regarding premature infants
- To collaborate with other EI professionals about training and education
- To demonstrate how “questions” can be answered by this level of research
What is Occupational Therapy?

- Occupational therapists assist people across the lifespan to participate in activities they want and need to do through use of therapeutic occupations (aota.org):
  - Self Care
  - Play/Leisure
  - Work
  - Rest
OT and Early Intervention

- Referral Process
- Initial Evaluation
- Determine areas of need
- Intervention
- Discharge or Referral for other services

Focus on Community-Based practice
Introduction

How did this study come to be?

This research was funded by Part C of the Individuals with Disabilities Education Act through a Faculty Grant from the Early On Center for Higher Education, an Innovative Project of Clinton County Regional Educational Service Agency.

How does it apply to professionals in the field?
Background

- Approximately 1 in 8 children born prematurely
- Infants initially cared for by health professionals in the NICU
- Occupational therapist member of NICU team
- Infants in the NICU being discharged earlier
- Needs at time of discharge:
  - Sensory modulation  - Oral motor development
  - Motor development  - Feeding
  - Coping behaviors  - Play
How do caregivers feel at time of discharge?
Research Questions

• What services do occupational therapists most frequently provide and deem most beneficial for premature infants and their families up to 12 months post-discharge from the NICU?

• What are the primary roles perceived to be valuable by OTs working with premature infants up to 12 months post-discharge?

• What evaluation tools do OTs feel are most beneficial for assessing premature infants up to 12 months post-discharge?
Problem Statement

- Limited research concerning premature infants’ transition.
- Limited research produced regarding the benefits of OT services and the role of the OT in providing treatment for premature infants after being discharged from the NICU.
- Therefore, a clear understanding of OT services, roles, and assessments with premature infants in the community is needed.
Purpose

• Add to the current literature of occupational therapy services provided to premature infants during their transition to the home setting

• Provide a base for future research concerning the most beneficial OT services for premature infants and their caregivers

• Provide support for OT’s role in premature infant’s transition from the NICU to the home setting
Significance

- Guide NICU and community based OTs with treatment practices
- Provide evidence about favorable services for the premature infant population will also provide a strong rationale as to the importance of OT services in the NICU and community
- Support OT roles and services for third party reimbursement
- Inform stakeholders about specific training and education wanted and needed
Literature Review
Vulnerabilities of Preterm Infants

Blackburn (1995)
- Common complications: Infection, cardiorespiratory problems, sudden infant death syndrome (SIDS), gastrointestinal difficulties, hernias, anemia, physical deformities due to NICU care, tone and movement abnormalities, learning problems, delayed fine motor abilities, and sensory disorders (e.g. vision, hearing, speech)
- “At risk” population who may require services short- or long-term

Case-Smith, Butcher, and Reed (1998)
- Significant difference between preterm infants’ and full-term infants’ Sensory Rating Scale summary scores (i.e. total of touch, movement, hearing, vision, and temperament) and sensitivity to touch
Literature Review
NICU vs. Home Environment

Aucott, Donohue, Atkins, & Allen (2002); American Occupational Therapy Association (2006); Cantu (2004)
- NICU environment vastly different from the womb
- NICU vastly different from the home environment

Segal and Beyer (2006)
- Barriers to home program interventions
- Parental adherence to home treatment programs were evaluated
Literature Review
Transitioning from NICU to Home Setting

Griffin and Abraham (2006)
- Parents need time to practice to transfer skills from NICU to the Home

- Disconnect between staff and parent views of teaching practices and learning during discharge from the NICU
Colyvas, Sawyer, & Campbell (2010)
- To provide education about premature infant roles, routines, occupations through participatory approaches

Caretto, et al. (2000)
- To provide parent education for infant feeding
Assessments/Evaluations
Subramaniam and Reid (2003); Coata, Engel-Hoek, & Bos, (2008); Howe, et al. (2008); Einarsson-Backes and Stewart (1992)
- Assessment: observations, feeding assessment, and neuromotor assessments

Interventions
Hwang, et al. (2010); Cochrane (1986); Koldewijn, et al. (2005)
- Feeding support, help regulate sensory input (vestibular-proprioceptive), and provide neurodevelopmental support
Importance to Study

• Transition from the well supported and resourceful NICU to the home setting is demanding time for families
• Many evaluation tools utilized (observation)
• Specific areas of need for premature infants and their caregivers
• Evidence regarding OT services most useful post NICU discharge will allow stakeholders to provide education and learning opportunities
Study Design

- Phenomenological, retrospective, cross-sectional study
- Gather qualitative data through an interview format
- Telephone interviews
- Series of 10 questions
Participants & Sampling Methods

• **Sample population:** 7 practicing, community-based occupational therapists working with premature infants in Michigan

• **Inclusion criteria:**
  
  • Licensed & registered OT treating premature infants within 12 months post-discharge from NICU
  
  • Michigan

  • Have 3+ years of experience treating premature infants
Instrumentation

• Self-designed interview
• Qualitative data
• Pilot test
• The interviews took approximately 15-20 minutes
• Conducted from Cook DeVos Center for Health Sciences
Validity

• Pilot Study
• Both researchers involved in interview
• 3 OT professionals to interpreted and analyzed the interview questions, study design, and methodology
• Participants were e-mailed a summary of the findings from their respective interview
• Research committee reviewed all phases of the study
Procedures

• Obtaining participants - intermediate school districts, early intervention programs, and NICUs in Michigan
• Contacted the participants by phone to obtain initial consent
• Emailed confirmation
• Informed consent forms included
• Phone interview at designated time
• Recorded
• Written script for interviewers
• Summary emailed to the interviewee to determine the accuracy of the data
- Assess Environment
- Personal Positioning
- NDT - development
- Feeding
- Self-regulation
- Gross motor
- Experience
- Fine motor
- Calming
- Sleep
- Knowledge - normal growth
- Parent education
- OT degree
- Parent of premies
- Support from coworkers
- Self-positioning
- Feed
- Emotions
- Sensory
- VPI
- Level II
- Interprofessional
- Facilitator
- Research
- Cont. Edu
- Clinical experience
- Family dynamics
- Calming
- Parent education
- Experience
- NDT - development
- Feeding issues
- Sensitivity to sick
- Self-calming
- Sleep
- Gross motor
- Experience
- Fine motor
- Calming
- Parent education
- Experience
- NDT - development
- Feeding
- Self-regulation
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- Parent education
- Experience
Results

Themes & 9 sub-themes

Occupational Therapy Interventions

Sub-themes: Evaluation

Feeding

Physical Treatment

Sensory Treatment
Support

Sub-themes: Medically-based Professionals

Occupational Therapists

Education
Results (cont.)

Family

Sub-themes: Fears Needs
Discussion

Question 1:
What do community-based occupational therapists believe their roles are in guiding the transition process for premature infants up to 12 months post-discharge?”

Support

Interpersonal relationship

Educator

Demonstration, Facilitation & Discussion (educate)

Participation-based approach

Roles established through experience, co-workers, & continuing education
Question 2:
What services do community-based occupational therapists most frequently provide and deem most beneficial for premature infants and their families up to 12 months post-discharge from the NICU?

- Education - most frequently used
- Feeding techniques
- Feeding positioning
- Resources & support
Question 3:

What evaluation tools do community-based occupational therapists feel are most beneficial for premature infants up to 12 months post-charge?

Observation – most frequent

Peabody Developmental Motor Scale

Infant/Toddler Sensory Profile

A need for more appropriate assessment tools
Application to OT and Early On

Training and education for OTs and other personnel
Specific intervention techniques in the areas of positioning, feeding and sensory abilities
Explore use of more standardized assessment techniques
Develop relevant evaluation tools
Prepare service providers to function as support and information givers during transition process
Consider how to bridge the transition from NICU to home based services
Limitations

- Small sample size
- Female OTs represented
- Sample from Michigan only
- Participants treated low numbers of premature infants
- Self-report interviews
- Retrospective study
Conclusions

Transition from NICU to the community is a difficult experience for a premature infant and family

OT vital member of treatment team

OT may provide support to ease the transition

Services commonly include: evaluation, feeding, physical treatment & sensory treatment

Need more evidenced-based research
Questions?
References


References, cont.


